

Customer No.: 31561
Application No.: 10/709,179
Docket No.: 10544-US-PA

REMARKS

Present Status of Application

The Office Action dated October 13, 2005, rejected claims 15-16 and 18 under 35 USC§102(e) as being anticipated by Ono et al. (US Publication No. 2003/0107129). Claims 17 and 19 were rejected under 35 USC§103(a) as being unpatentable over Ono in view of Akram (US Patent No. 6,861,763). Claim 20 was rejected under 35 USC§103(a) as being unpatentable over Ono in view of Koh (US Publication No. 2004/0135266).

Claim 15 has been amended for providing more descriptions for clarification purposes. No new matter has been added to the application by the amendments made to the specification, claims and drawings. This Amendment is promptly filed to place the above-captioned case in condition for allowance. After entering the amendments and considering the following discussions, a notice of allowance is respectfully solicited.

Discussion for 35 USC§102 and 103 rejections

Claims 15-16 and 18 were rejected under 35 USC§102(e) as being anticipated by Ono et al. (US Publication No. 2003/0107129). Claims 17 and 19 were rejected under 35 USC§103(a) as being unpatentable over Ono in view of Akram (US Patent No. 6,861,763). Claim 20 was rejected under 35 USC§103(a) as being unpatentable over Ono

Customer No.: 31561
Application No.: 10/709,179
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in view of Koh (US Publication No. 2004/0135266).

Claim 15 has been amended for clarification purposes.

Applicants submit that independent claim 15 patently defines over the prior references for at least the reason that the cited art fails to disclose each and every feature as claimed in the present invention.

The independent claim 15 recites:

*15. A method of fabricating bumps on a backside of a chip, comprising the steps of:
providing the chip with an active surface having at least a bonding pads thereon and the backside;*

*forming at least a bump pad on the backside of the chip; and
forming a bump directly on the bump pad.*

Applicant respectfully asserts that claim 1 is patentably distinct from the prior art structures, especially at least forming at least a bump pad on the backside of the chip or forming a bump directly on the bump pad.

The Office Action considered Ono's chip 15, interconnect pattern 14 and bump 19 comparable to the chip, the bump pad and the bump of this invention.

Applicants respectfully traverse this interpretation.

Ono discloses a method for fabricating a resin-encapsulated semiconductor device. Ono teaches forming a first interconnect pattern 11, a dielectric film 12 and a second interconnect pattern 14 on a metal plate. The chip 15 is mounted on the dielectric

Customer No.: 31561
Application No.: 10/709,179
Docket No.: 10544-US-PA

film 12 and electrically connected to the second interconnect pattern 14 by wires 17. As taught by Ono, the second interconnect pattern 14 is formed on an area other than the area where the chip 15 is mounted (paragraph [0029]). Clearly, chip 15 is not even physically connected with the second interconnect pattern 14 (Fig. 4B and paragraph [0030]), but is merely electrically connect with the second interconnect pattern 14.

In this case, even considering chip 15 is comparable to the chip of this invention, Ono does not teaches forming at least a bump pad on the backside of the chip because Ono's merely teaches forming second interconnect pattern 14 on the dielectric layer 12 and mounting the chip 15 on the dielectric layer 12, where the second interconnect pattern 14 is separated from the chip 15. It is unfair to construe Ono's teachings as forming the second interconnect pattern 14 on the backside of the chip 15, and to consider such misinterpretation as comparable to the process step of this invention.

Moreover, Ono's bump 19 is connected to the first interconnect pattern 11, but is not formed **directly on** the second interconnect pattern 14. Ono also fails to disclose forming a protective film on the active surface of the chip before forming the bump pad on the backside of the chip, because the step of encapsulating the chip 15 with the encapsulating resin 18 is performed after mounting the chip to the dielectric film 12 (paragraph [0028]).

Accordingly, the method of the present invention is patentably distinct from the

Customer No.: 31561
Application No.: 10/709,179
Docket No.: 10544-US-PA

prior art reference Ono because Ono fails to disclose all limitations of claim 15. For at least the foregoing reasons, all pending claims patently define over the cited reference and should be allowed.

Consequently, reconsideration and withdrawal of these 102 rejections are respectfully requested.

Regarding claims 17, 19 and 20, the Office Action further relied on Akram or Koh for teaching the mask layer or using a wire-binding machine.

Claim 20 has been amended for correction purposes.

As discussed above, the method of the present invention is patentably distinct from the prior art reference because Ono fails to disclose all limitations of independent claim 15. However, even considering the teachings of Akram or Koh relating to the features recited in dependent claims, the reference Akram or Koh still fails to remedy the deficiencies of Ono.

As a result, it is respectfully submitted that claims 17 and 19-20 patentably distinguishes over the cited references, either alone or in combination, for at least the reasons stated above as well as for the additional features that this claim recites.

Withdrawal of these rejections under 35 USC 103(a) is respectfully requested.

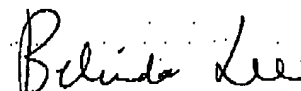
Customer No.: 31561
Application No.: 10/709,179
Docket No.: 10544-US-PA

CONCLUSION

In view of the foregoing, it is believed that all pending claims are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,


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